Approval Number: AIR 01-1001 NOC ID: 23

DEPARTMENT OF HEALTH
RADIOACTIVE AIR EMISSIONS
LICENSE AMENDMENT FOR

PROJECT TITLE: CONSTRUCTION AND OPERATION OF THE WASTE RECEIVING AND PROCESSING (WRAP) FACILITY

Date Approved: 01-Oct-01

Emission Unit Name: 200 AREA DIFFUSE/FUGITIVE

This is a MINOR, FUGITIVE, non-point source emission unit.

This emission unit requires the following Abatement Technology:

Applicable Requirements: **BARCT**

ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area:	Abatement Technology	Required # of Units	Additional Description/Conditions
			Abatement controls as required in the following Conditions and Limitations.

Additional abatement technologies required by this Notice of Construction will be listed in the Conditions and Limitations section.

This emission unit has the following Monitoring and Sampling Requirements:

Applicable Requirements: Monitoring, Testing and Quality Assurance WAC 246-247-075

Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
WAC 246-247-075[3]	Appendix B, Method 114	All radionuclides which could contribute 10% of the potential EDE.	As listed in the following Conditions and Limitations.

Sampling Requirements: Existing near-facility monitoring stations.

Additional monitoring or sampling requirements established by this NOC will be listed in the Conditions and Limitations section.

Change History

09/11/01 NOC Revision (DOE/RL-2000-34, revision 1) received September 11, 2001 and approved via AIR 01-1001 on October 1, 2001. Incorporated comments resolved during review of DOE/RL-2000-34, revision 0.

04/26/01 NOC revised (DOE/RL-2000-34, Rev. 0) February 6, 2001 and approved via AIR 01-405. This revision includes the recalculation of the MEI and the inclusion of diffuse/fugitive emissions.

05/04/99 Revision form submitted and approved May 4, 1999 to more accurately reflect actual operations.

01/20/99 Revision form submitted and approved January 20, 1999 to more accurately reflect actual operations.

07/09/96 Revised by RTAM on July 9, 1996, approval to change monitoring technology.

09/07/93 Original NOC (DOE/RL-93-15, Rev 0) approved September 7, 1993 via AIR 93-907.

CONDITIONS AND LIMITATIONS

1) The U.S. Department of Energy shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) The total abated emission limit for this Notice of Construction is limited to 5.63E-02 mrem/year to the Maximally Exposed Individual. The total unabated emission limit for this Notice of Construction is limited to 1.13E+02 mrem/year to the Maximally Exposed Individual.

3) **This process is limited to:**

At the WRAP FACILITY--
Examining, assaying, characterizing, treating, verifying, and repackaging solid radioactive material and mixed waste to enable treatment, storage, or disposal of low-level waste (LLW), transuranic (TRU) waste, TRU mixed waste, and low-level mixed waste (LLMW) in contact handled (CH) containers where the external surface dose rate does not exceed 200 millirem per hour.

At SHIPPING AND RECEIVING (200 Area Diffuse/Fugitive Emissions)--
Containers delivered to and transferred/shipped from the shipping and receiving shall be unloaded, visually inspected, bar code labeled, and radiologically surveyed with information pertaining to each container entered into the data management system.

Following visual inspection, transfer incoming drums to the NDE/NDA area for further characterization using the process described for the NDE/NDA below.

Once characterized, verified, and/or certified, the certified TRU waste must be loaded into a transuranic package transporter (TRUPACT-2) shipping cask for shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Verified LLW shall be transferred for disposal onsite. Mixed waste must be moved to an offsite treatment or permitted storage facility, or to an onsite treatment, disposal, and/or storage unit. Radioactive material that fails verification shall be returned to the generator, processed to correct the problem, or sent to another facility for further reprocessing.

During NONDESTRUCTIVE EXAMINATION/NONDESTRUCTIVE ASSAY SYSTEMS
(200 Area Diffuse/Fugitive Emissions)--
The NDE/NDA shall used to examine and to certify LLW, LLMW, TRU, and TRU mixed waste container contents without opening the containers.

In the PROCESS AREA (296-W-4 Emission Unit)--
The process area consists of four glovebox lines: a TRU waste process glovebox, a TRU waste restricted waste management (RWM) glovebox, a LLW process glovebox, and a LLW RWM glovebox. The following is allowed in the process gloveboxes: drums opened, contents sorted and sampled, if necessary, noncompliant items removed and transferred to the RWM gloveboxes, and remaining compliant waste repackaged into new drums.

Incoming drums generally shall be opened in gloveboxes. However, loosening of a lid or replace a damaged lid outside of a glovebox is allowed.

In the TRANSURANIC WASTE PROCESS LINE--

The TRU waste process glovebox line consists of stainless steel modular gloveboxes bolted together in a

linear configuration. Windows shall be gasketed and bolted to the glovebox wall, and gloveports shall be fitted to the glovebox wall and windows to accept push-through type gloves. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.

Process operations shall be performed inside of the gloveboxes by using the gloves and/or remote controlled manipulators. Drums shall be loaded into the glovebox through airlock and sealed-type entry systems.

In the TRANSURANIC WASTE RESTRICTED WASTE MANAGEMENT LINE--
The TRU waste RWM glovebox line consists of stainless steel. Window, gloveport, ventilation, and manipulator features shall comply to those described for the TRU waste process line glovebox. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.

The treatment and repackaging operations that occur in the TRU waste RWM glovebox is limited to the following.

Aerosol cans are depressurized and drained. The drained liquids are treated within the gloveboxes or retained in containers, which are sent to storage outside of the WRAP Facility. Vapors from the aerosol cans shall pass through a series of demisters for removal of entrained liquids, and shall be vented to the glovebox exhaust.

Miscellaneous inorganic liquids shall be sampled for characterization, neutralized if required, and solidified using stabilizing additives.

Miscellaneous organic liquids shall be sampled for characterization, treated within the gloveboxes or repackaged for transfer to storage facilities pending future treatment.

Corrosive materials shall be neutralized. After neutralization, the materials shall be solidified or loaded out for storage or treatment outside the WRAP Facility.

Other treatment such as mercury amalgamation, stabilization of heavy metals, and macroencapsulation are allowed to be performed.

Radioactive material shall be repackaged to meet acceptance criteria of the receiving facility.

Radioactive material is sampled.

The empty aerosol cans and other treated LLW packages will be loaded into new drums and routed to the LLW process glovebox for compaction or loaded out of the RWM glovebox for storage, disposal, or additional treatment.

In the LOW-LEVEL WASTE PROCESS LINE--
The LLW process glovebox line consists of stainless steel modular gloveboxes bolted together in a

linear configuration. Glovebox ventilation shall be of the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.

Drums shall enter the glovebox through an airlock entry system. Noncompliant items shall be bar code labeled and transferred to the LLW RWM glovebox using a reusable transfer system. Compliant waste shall be compacted and repackaged into new drums.

In the LOW-LEVEL WASTE RESTRUCTED WASTE MANAGEMENT PROCESS LINE--
The operations in the LLW RWM process line is limited those as described for the operations in the TRU waste RWM line.

4) **The Annual Possession Quantity is limited to the following radionuclides (Curies/year):**

Alpha 0	1.71E+04
Beta 0	2.56E+05

5) Diffuse/Fugitive emissions associated with drum storage shall be monitored using the 200 Area near-field ambient air monitors. Any change to this near-field ambient monitoring program must be approved by the department.
Condition added by AIR 01-405.

6) The sampling frequency shall follow that of the ambient near-field program.
Condition added by AIR 01-405.

7) Single station composites of ambient near-field air samples shall be analyzed for radionuclide expected to stored and handled at the facility.
Condition added by AIR 01-405.

8) This approval, with its Conditions and Limitations, constitutes an amendment to the Department's Radioactive Air Emission License, and must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c).
Condition added by AIR 01-405.

9) If this emission unit is not in compliance with the standards in WAC 245-247-040 during construction or operation, the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).
Condition added by AIR 01-405.

10) The facility shall notify the department seven days in advance of any planned pre-operational testing of the emission unit's control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).
Condition added by AIR 01-405.

11) The department retains the right to conduct stack sampling, environmental monitoring or other testing around this unit to assure compliance. If directed by the department, the facility must make provision for such testing (WAC 246-247-075(10) and (11).
Condition added by AIR 01-405.

12) The facility must be able to demonstrate workers associated with this emission unit are trained in the use and maintenance of control and monitoring systems, and in the performance of associated tests and emergency procedures (WAC 246-247-075(12)).
Condition added by AIR 01-405.

13) The facility must be able to demonstrate the reliability and accuracy of emissions data and other test results from this emission unit (WAC 246-247-075(13) and WAC 246-247-075(6)).
Condition added by AIR 01-405.

14) The department reserves the right to inspect and audit this emission unit during construction and operation-- including all activities, equipment, operations, documents, data, and other records related to compliance with WAC 246-247-080(1)).
Condition added by AIR 01-405.

15) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards such as ANSI/ASME NQA-1-1988, ANSI/ASME NQA-2-1986, QAMS-004 and QAMS-005. (WAC 246-247-075(6)).
Condition added by AIR 01-405.

16) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).
Condition added by AIR 01-405.

17) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).
Condition added by AIR 01-405.

18) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).
Condition added by AIR 01-405.

19) Any unexpected release of radioactivity, shutdown or other condition that if allowed to persist, would result in the emission of radionuclides in excess of any standards or limitation in the license, or that lasts more than four hours, must be reported to the department within 24 hours. Applicable standards (WAC 246-247-040) including unit specific emission limits, the offsite dose standard, BARCT or ALARACT, whichever is applicable, or any limitations included in the approval.
Condition added by AIR 01-405.

20) When this project is complete, or operations cease, the facility must notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(5)).
Condition added by AIR 01-405.

21) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).
Condition added by AIR 01-405.

22) The owner/operator must inform the Department of Health whenever the activity associated with this NOC or any of the conditions or limits contained in this approval are completed, abandoned, or otherwise made obsolete.
Condition added by AIR 01-405.

DEPARTMENT OF HEALTH
RADIOACTIVE AIR EMISSIONS
LICENSE AMENDMENT FOR

PROJECT TITLE: CONSTRUCTION AND OPERATION OF THE WASTE RECEIVING AND PROCESSING (WRAP) FACILITY

Date Approved: 01-Oct-01

Emission Unit Name: 296-W-4

This is a MAJOR, ACTIVELY ventilated emission unit.

This emission unit requires the following Abatement Technology:

Applicable Requirements: **BARCT**

ALARACT [WAC 246-247-040(4)]
BARCT [WAC 246-247-040(3)]

Zone or Area:	Abatement Technology	Required # of Units	Additional Description/Conditions
	HEPA	2	Redundant systems in parallel consisting of two banks each
	HEPA	2	Redundant systems in parallel consisting of two banks each
	Prefilter	1	Prefilter for each HEPA housing
	Fan	4	

Additional abatement technologies required by this Notice of Construction will be listed in the Conditions and Limitations section.

This emission unit has the following Monitoring and Sampling Requirements:

Applicable Requirements: Monitoring, Testing and Quality Assurance WAC 246-247-075

Regulatory Requirements	Monitoring and Testing Procedure	Radionuclides Requiring Measurement	Sampling Frequency
40 CFR 61.93(b)(4)(i) & WAC 246-247-075(3)	Method 2 appendix A Method 114 appendix B 61.93(b)(2)(ii) ANSI N13.1	All radionuclides which could contribute 10% of the potential EDE.	Continuous, Collect samples biweekly at a minimum

Sampling Requirements: Continuous

Additional monitoring or sampling requirements established by this NOC will be listed in the Conditions and Limitations section.

Change History

09/11/01 NOC Revision (DOE/RL-2000-34, revision 1) received September 11, 2001 and approved via AIR 01-1001 on October 1, 2001. Incorporated comments resolved during review of DOE/RL-2000-34, revision 0.

04/26/01 NOC revised (DOE/RL-2000-34, Rev. 0) February 6, 2001 and approved via AIR 01-405. This revision includes the recalculation of the MEI and the inclusion of diffuse/fugitive emissions.

05/04/99 Revision form submitted and approved May 4, 1999 to more accurately reflect actual operations.

01/20/99 Revision form submitted and approved January 20, 1999 to more accurately reflect actual operations.

07/09/96 Revised by RTAM on July 9, 1996, approval to change monitoring technology.

CONDITIONS AND LIMITATIONS

1) The U.S. Department of Energy shall comply with all Conditions and Limitations of this license (WAC 246-247-060(5)).

2) The total abated emission limit for this Notice of Construction is limited to 5.63E-02 mrem/year to the Maximally Exposed Individual. The total unabated emission limit for this Notice of Construction is limited to 1.13E+02 mrem/year to the Maximally Exposed Individual.

3) **This process is limited to:**

At the WRAP FACILITY--
Examining, assaying, characterizing, treating, verifying, and repackaging solid radioactive material and mixed waste to enable treatment, storage, or disposal of low-level waste (LLW), transuranic (TRU) waste, TRU mixed waste, and low-level mixed waste (LLMW) in contact handled (CH) containers where the external surface dose rate does not exceed 200 millirem per hour.

At SHIPPING AND RECEIVING (200 Area Diffuse/Fugitive Emissions)--
Containers delivered to and transferred/shipped from the shipping and receiving shall be unloaded, visually inspected, bar code labeled, and radiologically surveyed with information pertaining to each container entered into the data management system.

Following visual inspection, transfer incoming drums to the NDE/NDA area for further characterization using the process described for the NDE/NDA below.

Once characterized, verified, and/or certified, the certified TRU waste must be loaded into a transuranic package transporter (TRUPACT-2) shipping cask for shipment to the Waste Isolation Pilot Plant (WIPP) in New Mexico. Verified LLW shall be transferred for disposal onsite. Mixed waste must be moved to an offsite treatment or permitted storage facility, or to an onsite treatment, disposal, and/or storage unit. Radioactive material that fails verification shall be returned to the generator, processed to correct the problem, or sent to another facility for further reprocessing.

During NONDESTRUCTIVE EXAMINATION/NONDESTRUCTIVE ASSAY SYSTEMS
(200 Area Diffuse/Fugitive Emissions)--
The NDE/NDA shall used to examine and to certify LLW, LLMW, TRU, and TRU mixed waste container contents without opening the containers.

In the PROCESS AREA (296-W-4 Emission Unit)--
The process area consists of four glovebox lines: a TRU waste process glovebox, a TRU waste restricted waste management (RWM) glovebox, a LLW process glovebox, and a LLW RWM glovebox. The following is allowed in the process gloveboxes: drums opened, contents sorted and sampled, if necessary, noncompliant items removed and transferred to the RWM gloveboxes, and remaining compliant waste repackaged into new drums.

Incoming drums generally shall be opened in gloveboxes. However, loosening of a lid or replace a damaged lid outside of a glovebox is allowed.

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The TRU waste process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Windows shall be gasketed and bolted to the glovebox wall, and gloveports shall be fitted to the glovebox wall and windows to accept push-through type gloves. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.

Process operations shall be performed inside of the gloveboxes by using the gloves and/or remote controlled manipulators. Drums shall be loaded into the glovebox through airlock and sealed-type entry systems.

In the TRANSURANIC WASTE RESTRICTED WASTE MANAGEMENT LINE--
The TRU waste RWM glovebox line consists of stainless steel. Window, gloveport, ventilation, and manipulator features shall comply to those described for the TRU waste process line glovebox. Glovebox ventilation shall be the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.

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Miscellaneous organic liquids shall be sampled for characterization, treated within the gloveboxes or repackaged for transfer to storage facilities pending future treatment.

Corrosive materials shall be neutralized. After neutralization, the materials shall be solidified or loaded out for storage or treatment outside the WRAP Facility.

Other treatment such as mercury amalgamation, stabilization of heavy metals, and macroencapsulation are allowed to be performed.

Radioactive material shall be repackaged to meet acceptance criteria of the receiving facility.

Radioactive material is sampled.

The empty aerosol cans and other treated LLW packages will be loaded into new drums and routed to the LLW process glovebox for compaction or loaded out of the RWM glovebox for storage, disposal, or additional treatment.

In the LOW-LEVEL WASTE PROCESS LINE--
The LLW process glovebox line consists of stainless steel modular gloveboxes bolted together in a linear configuration. Glovebox ventilation shall be of the once-through type. Air shall be drawn from the process room, through a nontestable high-efficiency process filter, and into the glovebox. The air shall be exhausted from the glovebox through another nontestable high-efficiency process filter to the combined glovebox exhaust system.

Drums shall enter the glovebox through an airlock entry system. Noncompliant items shall be bar code labeled and transferred to the LLW RWM glovebox using a reusable transfer system. Compliant waste shall be compacted and repackaged into new drums.

In the LOW-LEVEL WASTE RESTRUCTED WASTE MANAGEMENT PROCESS LINE--
The operations in the LLW RWM process line is limited those as described for the operations in the TRU waste RWM line.

4) **The Annual Possession Quantity is limited to the following radionuclides (Curies/year):**

Alpha 0	1.00E+04
Beta 0	1.50E+05

5) These conditions and limitations must be proceduralized prior to starting the activities described in the Notice of Construction.
Condition added by AIR 01-405.

6) This approval, with its Conditions and Limitations, constitutes an amendment to the Department's Radioactive Air Emission License, and must be included in the next revision of the Hanford Air Operating Permit (WAC 246-247-060(1)(e) and (2)(c).
Condition added by AIR 01-405.

7) If this emission unit is not in compliance with the standards in WAC 245-247-040 during construction or operation, the department reserves the right to require modifications to bring it into compliance (WAC 246-247-060-(2)(d)).
Condition added by AIR 01-405.

8) The facility shall notify the department seven days in advance of any planned pre-operational testing of the emission unit's control, monitoring or containment systems. The department reserves the right to observe such tests (WAC 246-247-060(4)).
Condition added by AIR 01-405.

9) The department retains the right to conduct stack sampling, environmental monitoring or other testing around this unit to assure compliance. If directed by the department, the facility must make provision for such testing (WAC 246-247-075(10) and (11).
Condition added by AIR 01-405.

10) The facility must be able to demonstrate workers associated with this emission unit are trained in the use and maintenance of control and monitoring systems, and in the performance of associated tests and emergency procedures (WAC 246-247-075(12)).
Condition added by AIR 01-405.

11) The facility must be able to demonstrate the reliability and accuracy of emissions data and other test results from this emission unit (WAC 246-247-075(13) and WAC 246-247-075(6)).
Condition added by AIR 01-405.

12) The department reserves the right to inspect and audit this emission unit during construction and operation-- including all activities, equipment, operations, documents, data, and other records related to compliance with WAC 246-247-080(1)).

Condition added by AIR 01-405.

13) The facility must be able to demonstrate that it has a quality assurance program compatible with applicable national standards such as ANSI/ASME NQA-1-1988, ANSI/ASME NQA-2-1986, QAMS-004 and QAMS-005. (WAC 246-247-075(6)).

Condition added by AIR 01-405.

14) The department may require an ALARACT demonstration at any time (WAC 246-247-080(1)).

Condition added by AIR 01-405.

15) All reports and records must be kept and reported according to 40 CFR 61, Subpart H (WAC 246-247-080(2)).

Condition added by AIR 01-405.

16) All measured or calculated emissions must be reported annually (WAC 246-247-080(3)).

Condition added by AIR 01-405.

17) Report to the department within 24 hours, any unexpected release of radioactivity, shutdown or other condition that, if allowed to persist (or lasts more than four hours), would result in the emission of radionuclides in excess of any standards or limitation in the license. Applicable standards (WAC 246-247-040) include unit specific emission limits (paragraph 5), the offsite dose standard (paragraph 1), BARCT (paragraph 3) or ALARACT (paragraph 4), whichever is applicable, or any limitations included in this approval (paragraph 5) (WAC 246-247-080(5)).

Condition added by AIR 01-405.

18) When this project is complete, or operations cease, the facility must notify the department via a report of closure, including whether or not any potential for airborne releases occurred (WAC 246-247-080(5)).

Condition added by AIR 01-405.

19) The facility shall make requested documents available in a timely manner for review. (WAC 246-247-080(10)).

Condition added by AIR 01-405.

20) The owner/operator must inform the Department of Health whenever the activity associated with this NOC or any of the conditions or limits contained in this approval are completed, abandoned, or otherwise made obsolete.

Condition added by AIR 01-405.